

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant ; Ann M. Lees et al. Art Unit :
Serial No. : Unassigned Examiner :
Filed : Herewith
Title : NOVEL LOW DENSITY LIPOPROTEIN BINDING PROTEINS AND THEIR
USE IN DIAGNOSING AND TREATING ATHEROSCLEROSIS

Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Under 35 U.S.C. §120, this application relies on the earlier filing date of U.S. Patent Application No. 09/616,289, filed July 14, 2000, U.S. Patent Application No. 09/517,849, filed March 2, 2000, and U.S. Patent Application Serial No. 08/979,608, filed November 26, 1997. The references listed in the attached form PTO-1449 were submitted to or cited by the Office in a prior application are therefore not provided in this application. Copies of communications from foreign patent offices in counterpart applications are enclosed. The communications are dated July 2, 2001, and September 27, 2001.

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Page : 2

Attorney's Docket No.: 10797-004003

This statement is being filed with the application. Please apply any charges or credits to
Deposit Account No. 06-1050, referencing Attorney Docket No. 10797-004003.

Respectfully submitted,

Date: December 17, 2001

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Substitute Form PTO-1449
(Modified)U.S. Department of Commerce
Patent and Trademark OfficeAttorney's Docket No.
10797-004003Application No.
Unassigned**Information Disclosure Statement
by Applicant**

(Use several sheets if necessary)

(37 CFR §1.98(b))

Applicant
Ann M. Lees et al.Filing Date
Herewith

Group Art Unit

10/02/99
12/17/01**U.S. Patent Documents**

Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	4,660,563	04/28/1987	Lees	128	654	
	AB	4,877,599	10/31/1989	Lees	424	1.1	
	AC	5,196,324	03/23/1993	Bumol et al.	435	70.21	
	AD	5,665,872	09/09/1997	Saito et al.	536	23.5	
	AE	5,726,153	03/10/1998	Lees et al.	514	12	

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AF	WO 91/06011	05/02/1991	PCT				
	AG	WO 91/16919	11/14/1991	PCT				
	AH	WO 94/16074	07/21/1994	PCT				
	AI	WO 98/23282	06/04/1998	PCT				
	AJ	EP 0 586 094 A1	03/09/1994	EPO				
	AK	EP 0773290 A2	05/14/1997	EPO				
	AL	DE 42 22 385 A1	01/13/1994	Germany				
	AM	J59206046	11/21/1984	Japan				

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AN	Accession AF006088, GenBank, December 15, 1999
	AO	Accession AF017807, GenBank, September 18, 1997
	AP	Accession AL022098, GenBank, November 23, 1999
	AQ	Accession AL049795, GenBank, February 18, 2000
	AR	Accession AL137800, GenBank, June 20, 2000
	AS	Accession L15344, GenBank, May 25, 1995
	AT	Accession NM005717, GenBank, June 9, 1999
	AU	GenBank™ Accession No. AA287095 (August 14, 1997)
	AV	GenBank™ Accession No. R76498 (June 6, 1995)

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Date Considered

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Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AW	GenBank™ Accession No. W07246 (April 25, 1996)
	AX	Camejo et al., "Characterization and Properties of a Lipoprotein-Complexing Proteoglycan from Human Aorta," Atherosclerosis, 35:307-320, (1980)
	AY	Chang et al., "Low-Density Lipoprotein Modification and Arterial Wall accumulation In a Rabbit Model of Atherosclerosis," Biochemistry, 32(33):8518-8524, (1993)
	AZ	Chang et al., "Time Course of ¹²⁵ I-Labeled LDL Accumulation in the Healing, Balloon-Deendothelialized Rabbit Aorta," Arteriosclerosis and Thrombosis, 12(9):1088-1098, (September 1992)
	AAA	Davies, "Flow-Mediated Endothelial Mechanotransduction," Physiological Reviews, 75(3):519-560, (July 1995)
	ABB	de Rijke et al., "Rat Liver Kupffer and Endothelial Cells Express Different Binding Proteins for Modified Low Density Lipoproteins," The Journal of Biological Chemistry, 269(2):824-827, (January 14, 1994)
	ACC	DePaola et al., "Vascular Endothelium Responds to Fluid Shear Stress Gradients," Arteriosclerosis and Thrombosis, 12(11):1254-1257, (November 1992)
	ADD	Esterbauer et al., "The Role of Lipid Peroxidation and Antioxidants In Oxidative Modification of LDL," Free Radical Biology & Medicine, 13:341-390, (1992)
	AEE	Fischman et al., "Accumulation of Native and Methylated Low Density Lipoproteins by Healing Rabbit Arterial Wall," Arteriosclerosis, 7(4):361-366, (July/August 1987)
	AFF	Gimbrone, Jr. et al., "Vascular Endothelium An Integrator of Pathophysiological Stimuli in Atherogenesis," Annals New York Academy of Sciences, 748:122-131, (1995)
	AGG	Gofman et al., "Blood Lipids and Human Atherosclerosis," The Journal of the American Heart Association, II(2):161-178, (August 1950)
	AHH	Hoff et al., "Apolipoprotein B Retention in the Grossly Normal and Atherosclerotic Human Aorta," Circulation Research, 41(5):684-690, (November 1977)
	AII	Hoff et al., "Detergent Extraction of Tightly-Bound apoB from Extracts of Normal Aortic Intima and Plaques," Experimental and Molecular Pathology, 28:290-300, (1978)
	AJJ	Kuzmenko et al., "Characteristics of Smooth Muscle Cell Lipoprotein Binding Proteins (p105/p130) as T-Cadherin and Regulation by Positive and Negative Growth Regulators," Biochemical and Biophysical Research Communications, 246:489-494, (1998)
	AKK	Lee et al., "Nucleotide sequence of the rat low density lipoprotein receptor cDNA," Nucleic Acids Res. 17(3):1259-1260 (1989)
	ALL	Lees et al., " ^{99m} Tc-labeled low density lipoprotein: receptor recognition and intracellular sequestration of radiolabel," JOURNAL OF LIPID RESEARCH, 32(1):1-8 (1991)
	AMM	Lees et al., "Imaging Human Atherosclerosis with ^{99m} Tc-labeled Low Density Lipoproteins," Arteriosclerosis, 8(5):461-470, (September/October 1988)
	ANN	Minick et al., "Role of Endothelium and Hypercholesterolemia in Intimal Thickening and Lipid Accumulation," American Journal of Pathology, 95(1):131-151, Figs. 1-7, (April 1979)
	AOO	Morel et al., "Endothelial and Smooth Muscle Cells Alter Low Density Lipoprotein In Vitro by Free Radical Oxidation," Arteriosclerosis, 4(4):357-364, (July/August 1984)
	APP	Nielsen, "Transfer of Low Density Lipoprotein Into the Arterial Wall and Risk of Atherosclerosis," Atherosclerosis, 123:1-15, (1996)

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	AQQ	Nievelstein et al., "Lipid accumulation in Rabbit Aortic Intima 2 Hours After Bolus Infusion of Low Density Lipoprotein," Arteriosclerosis and Thrombosis, 11(6):1795-1805, (November/December 1991)
	ARR	Ramprasad et al., "Cell Surface Expression of Mouse Macrosialin and Human CD68 and Their Role As Macrophage Receptors for Oxidized Low Density Lipoprotein," Proc. Natl. Acad. Sci. USA, 93:14833-14838, (December 1996)
	ASS	Roberts et al., "Selective Accumulation of Low Density Lipoproteins In Damaged Arterial Wall," Journal of Lipid Research, 24:1160-1167, (1983)
	ATT	Scandinavian Simvastatin Survival Study Group, "Randomised Trial of Cholesterol Lowering in 4444 Patients with Coronary Heart Disease: the Scandinavian Simvastatin Survival Study (4S), The Lancet, 344:1383-1389, (November 19, 1994)
	AUU	Schwenke et al., "Initiation of Atherosclerotic Lesions in Cholesterol-fed Rabbits," Arteriosclerosis, 9(6):895-907, (November/December 1989)
	AVV	Schwenke et al., "Initiation of Atherosclerotic Lesions in Cholesterol-fed Rabbits," Arteriosclerosis, 9(6):908-918, (November/December 1989)
	AWW	Shepherd et al., "Prevention of Coronary Heart Disease with Pravastatin In Men with Hypercholesterolemia," The New England Journal of Medicine, 333(20):1301-1307, (November 16, 1995)
	AXX	Shih, "Focal Accumulation of An Apolipoprotein B-based Synthetic Oligopeptide in the Healing Rabbit Arterial Wall," Proc. Natl. Acad. Sci. USA, 87:1436-1440, (February 1990)
	AYY	Sigma Chemical Company, Biochemicals Organic Compounds for Research and Diagnostic Reagents, p. 1906 (1995)
	AZZ	Smith, "The Relationship Between Plasma and Tissue Lipids in human Atherosclerosis," Adv. Lipid Res., 12:1-49, (1974)
	AAAA	Srinivasan et al., "Isolation of Lipoprotein-Acid Mucopolysaccharide Complexes from Fatty Streaks of Human Aortas," Atherosclerosis, 16:95-104, (1972)
	ABBB	Stamler et al., "Is Relationship Between Serum Cholesterol and Risk of Premature Death From Coronary Heart Disease Continuous and Graded?," JAMA, 256(20):2823-2828, (November 28, 1986)
	ACCC	Stampfer et al., "A Prospective Study of Cholesterol, Apolipoproteins, and the Risk of Myocardial Infarction," New England Journal of Medicine, 325:373-381, (August 8, 1991)
	ADDD	Stary et al., "A Definition of Initial, Fatty Streak, and Intermediate Lesions of Atherosclerosis," Arteriosclerosis and Thrombosis, 14(5):840-856, (May 1994)
	AEEE	Steinberg et al., "Beyond Cholesterol Modifications of Low-Density Lipoprotein That Increase Its Atherogenicity," The New England Journal of Medicine, 320(14):915-924, (April 6, 1989)
	AFFF	Steinbrecher et al., "Modification of Low Density Lipoprotein By Endothelial Cells Involves Lipid Peroxidation and Degradation of Low Density Lipoprotein Phospholipids," Proc. Natl. Acad. Sci. USA, 81:3883-3887, (June 1984)
	AGGG	Tkachuk, "Identification of an atypical lipoprotein-binding protein from human aortic smooth muscle as T-cadherin," FEBS Letters, 421:208-212, (1998)
	AHHH	Weisgraber et al., "Role of the Lysine Residues of Plasma Lipoproteins in High Affinity Binding to Cell Surface Receptors on Human Fibroblasts," The Journal of Biological Chemistry, 253:9053-9062, (1978)

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	AIII	Welch et al., "Actin Polymerization is Induced by Arp2/3 Protein Complex at the Surface of Listeria Monocytogenes," Nature, 385:265-269, (January 16, 1997)
	AJJJ	Welch et al., "The Human Arp2/3 Complex Is Composed of Evolutionarily Conserved Subunits and Is Localized to Cellular Regions of Dynamic Actin Filament Assembly," The Journal of Cell Biology, 138(2):375-384, (July 28, 1997)
	AKKK	Williams, "The Response-to-Retention Hypothesis of Early Atherogenesis," Arteriosclerosis, Thrombosis, and Vascular Biology, 15(5):551-561, (May 1995)
	ALLL	Yang et al., "Protein farnesyltransferase in plants. Molecular cloning and expression of a homolog of the beta subunit from the garden pea," Plant Physiol. 101:667-674 (1993)

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